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COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	4.76	211.27
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
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FILE COVERS 1907 - 12 Mar 2004 VOL 140 ISS 12
 FILE LAST UPDATED: 11 Mar 2004 (20040311/ED)

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=> file wpix

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.44	211.71
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.69

FILE 'WPIX' ENTERED AT 16:23:33 ON 12 MAR 2004
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FILE LAST UPDATED: 10 MAR 2004 <20040310/UP>
 MOST RECENT DERWENT UPDATE: 200417 <200417/DW>
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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KOROMA EIC1700

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 SDIS USING THE TIME RANGE CODE WILL NEED TO BE UPDATED.
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=> file jicst		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	1.92	213.63
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.69

FILE 'JICST-EPLUS' ENTERED AT 16:23:38 ON 12 MAR 2004
 COPYRIGHT (C) 2004 Japan Science and Technology Agency (JST)

FILE COVERS 1985 TO 8 MAR 2004 (20040308/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
 TERM (/CT) THESAURUS RELOAD.

=> file japio		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.51	214.14
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-0.69

FILE 'JAPIO' ENTERED AT 16:23:43 ON 12 MAR 2004
 COPYRIGHT (C) 2004 Japanese Patent Office (JPO)- JAPIO

FILE LAST UPDATED: 1 MAR 2004 <20040301/UP>
 FILE COVERS APR 1973 TO OCTOBER 31, 2003

<<< GRAPHIC IMAGES AVAILABLE >>>

=> d que

L10	30532	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	RARE EARTH(3A)ELEMENT
L11	255401	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	SCANDIUM OR YTTRIUM OR

KOROMA EIC1700

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LANTHANIDES OR BASTNASITE OR MONAZITE OR LOPARITE OR CERIUM OR
THULIUM OR LUTETIUM
L12      273649 SEA FILE=CAPLUS ABB=ON PLU=ON L10 OR L11
L13      291339 SEA FILE=CAPLUS ABB=ON PLU=ON BARIUM OR BA
L14      1069233 SEA FILE=CAPLUS ABB=ON PLU=ON COPPER OR CU
L16       1 SEA FILE=REGISTRY ABB=ON PLU=ON "TRIFLUOROACETIC ACID"/CN
L17      7221 SEA FILE=CAPLUS ABB=ON PLU=ON L16
L19       1 SEA FILE=REGISTRY ABB=ON PLU=ON "PENTAFLUOROPROPIONIC
ACID"/CN
L20      288 SEA FILE=CAPLUS ABB=ON PLU=ON L19
L21      353 SEA FILE=CAPLUS ABB=ON PLU=ON PENTAFLUOROPROPIONIC ACID OR
L20
L23       1 SEA FILE=REGISTRY ABB=ON PLU=ON PYRIDINE/CN
L24       1 SEA FILE=REGISTRY ABB=ON PLU=ON ACETYLACETONE/CN
L26      12873 SEA FILE=CAPLUS ABB=ON PLU=ON L24
L27       1 SEA FILE=REGISTRY ABB=ON PLU=ON CALCIUM/CN
L28       1 SEA FILE=REGISTRY ABB=ON PLU=ON STRONTIUM/CN
L31      203721 SEA FILE=CAPLUS ABB=ON PLU=ON L23 OR PYRIDINE
L32      19480 SEA FILE=CAPLUS ABB=ON PLU=ON ACETYLACETONE OR L26
L33      1187411 SEA FILE=CAPLUS ABB=ON PLU=ON L27 OR CALCIUM OR CA
L34      234451 SEA FILE=CAPLUS ABB=ON PLU=ON STRONTIUM OR SR OR L28
L35       29 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND L13 AND L14 AND (L17
OR L21)
L36       88 SEA FILE=CAPLUS ABB=ON PLU=ON L31 AND L32 AND (L33 OR L34)
L37       2 SEA FILE=CAPLUS ABB=ON PLU=ON L36 AND L35
L38      58232 SEA FILE=CAPLUS ABB=ON PLU=ON L12 AND L13 AND L14
L39      34 SEA FILE=CAPLUS ABB=ON PLU=ON L38 AND L31 AND (L33 OR L34)
L44       6 SEA FILE=CAPLUS ABB=ON PLU=ON (L37 OR L39) AND SUPERCONDUCTOR
?
L45       2 SEA FILE=WPIX ABB=ON PLU=ON (L37 OR L39) AND SUPERCONDUCTOR?
L46       1 SEA FILE=JICST-EPLUS ABB=ON PLU=ON (L37 OR L39) AND SUPERCOND
UCTOR?
L49       7 DUP REM L44 L45 L46 (2 DUPLICATES REMOVED)

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=> d ti 1-7

YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS, WPIX' - CONTINUE? (Y)/N:y

L49 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
TI Rare earth-**Ba-Cu** salt complexes with organic ligands for
coating of metal substrates and calcining to form YBa₂Cu₃O₇-type
superconductor deposit

L49 ANSWER 2 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN
TI Solution composition for rare earth **superconductor** film
production, is homogeneous solution of metal complex having metal ion
coordinated to **pyridine**, trifluoroacetic acid or pentafluoro
propionic acid.

L49 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Compositionally different polymer-based sensor elements and methods for preparing same

L49 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
 TI Preparation of epitaxial YbBa2Cu3O7- δ on SiTiO3 single-crystal substrates using a solution process

L49 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Molecular design of sol-gel derived ceramic **superconductors**

L49 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Preparation of high-temperature-**superconductor** ceramic bodies

L49 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Manufacture of oxide **superconductor**

=> d all 1-7 149

YOU HAVE REQUESTED DATA FROM FILE 'CAPLUS, WPIX' - CONTINUE? (Y)/N:y

L49 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
 AN 2002:754854 CAPLUS
 DN 137:271749
 ED Entered STN: 04 Oct 2002
 TI Rare earth-**Ba-Cu** salt complexes with organic ligands for coating of metal substrates and calcining to form YBa2Cu3O7-type **superconductor** deposit
 IN Manabe, Takaaki; Yamaguchi, Iwao; Tsuchiya, Tetsuo; Kumagai, Toshiya; Mizuta, Susumu; Nakamura, Susumu
 PA National Institute of Advanced Industrial Science and Technology, Japan
 SO U.S. Pat. Appl. Publ., 6 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM H01B001-00
 ICS H01F001-00
 NCL 252500000
 CC 76-4 (Electric Phenomena)
 Section cross-reference(s): 57

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002139960	A1	20021003	US 2002-86377	20020304
	JP 2002284525	A2	20021003	JP 2001-90925	20010327
PRAI	JP 2001-90925	A	20010327		

AB The slurry for forming the YBa2Cu3O7 **superconductor** deposit contains rare-earth metal, **Ba**, and **Cu** salt complexes with the ligands of trifluoroacetic acid (or **pentafluoropropionic acid**), **pyridine**, and **acetylacetone**. The

starting mixture optionally contains minor **Ca** and/or **Sr**.
 The typical mixture contains acetylacetonates of the rare-earth metal, **Ba**, and **Cu** in solution containing **pyridine** and trifluoroacetic acid (or **pentafluoropropionic acid**), with the metal stoichiometry corresponding to that in the oxide product. The superconductive layer is obtained by applying the organic solution of the metal complex composition on a substrate, followed by heating the coating at 200-500° and calcining at 700-1150° in steam-containing atmospheric. The thickness of calcined oxide coating can be increased by multiple applications of the slurry followed by calcination, reaching nominally 1.5 µm in 8 stages. The calcined **SmBa2Cu3O7** coating with epitaxial growth showed the supercond. with critical temperature of 85 K.

ST rare earth **barium** cuprite coating elec supercond; org ligand metal complex calcined cuprate **superconductor**

IT Cuprates, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (coating, complexes for; metal-salt complexes with organic ligands for coating of metal substrates and calcining to form **YBa2Cu3O7**-type **superconductors**)

IT **Superconductors**

(cuprate, complexes for; metal-salt complexes with organic ligands for coating of metal substrates and calcining to form **YBa2Cu3O7**-type **superconductors**)

IT Rare earth compounds

RL: MOA (Modifier or additive use); USES (Uses)
 (cuprates with, for **superconductors**; metal-salt complexes with organic ligands for coating of metal substrates and calcining to form **YBa2Cu3O7**-type **superconductors**)

IT **76-05-1**, Trifluoroacetic acid, uses **110-86-1**, **Pyridine**, uses **422-64-0**, **Pentafluoropropionic acid**

RL: MOA (Modifier or additive use); USES (Uses)
 (coating mixture containing, for **superconductors**; metal-salt complexes with organic ligands for coating of metal substrates and calcining to form **YBa2Cu3O7**-type **superconductors**)

IT 17272-66-1D, Acetylacetonate, complexes with

RL: MOA (Modifier or additive use); USES (Uses)
 (coating mixture containing; metal-salt complexes with organic ligands for coating of metal substrates and calcining to form **YBa2Cu3O7**-type **superconductors**)

IT 109064-29-1, **Barium copper yttrium oxide** (**Ba2Cu3YO7**)

RL: TEM (Technical or engineered material use); USES (Uses)
 (coating with, for **superconductors**; metal-salt complexes with organic ligands for coating of metal substrates and calcining to form **YBa2Cu3O7**-type **superconductors**)

IT 7440-19-9D, Samarium, salts **7440-24-6D**, **Strontium**, salts **7440-39-3D**, **Barium**, salts **7440-50-8D**, **Copper**, salts **7440-64-4D**, **Ytterbium**, salts **7440-65-5D**, **Yttrium**, salts **7440-70-2D**, **Calcium**, salts

RL: MOA (Modifier or additive use); USES (Uses)
 (complexing mixture containing, for **superconductors**; metal-salt

complexes with organic ligands for coating of metal substrates and calcining to form YBa₂Cu₃O₇-type **superconductors**)

IT 1309-48-4, Magnesia, uses 1313-99-1, Nickel oxide (NiO), uses 1314-23-4, Zirconia, uses 7440-02-0, Nickel, uses 7440-22-4, Silver, uses 12003-65-5, Lanthanum aluminate 12060-59-2, **Strontium titanate**

RL: TEM (Technical or engineered material use); USES (Uses) (substrate, **superconductor** coating on; metal-salt complexes with organic ligands for coating of substrates and calcining to form YBa₂Cu₃O₇-type **superconductors**)

L49 ANSWER 2 OF 7 WPIX COPYRIGHT 2004 THOMSON DERWENT on STN

AN 2003-170479 [17] WPIX

DNN N2003-134766 DNC C2003-044581

TI Solution composition for rare earth **superconductor** film production, is homogeneous solution of metal complex having metal ion coordinated to **pyridine**, trifluoroacetic acid or pentafluoro propionic acid.

DC E12 L03 U14 X12

PA (DOKU-N) DOKURITSU GYOSEI HOJIN SANGYO GIJUTSU SO

CYC 1

PI JP 2002284526 A 20021003 (200317)* 8p C01G003-00

ADT JP 2002284526 A JP 2001-90989 20010327

PRAI JP 2001-90989 20010327

IC ICM C01G003-00
ICS C01G001-00; C07C053-18; C07C053-21; H01B013-00

ICA C07D213-06; C07F001-08; C07F003-00; C07F005-00

AB JP2002284526 A UPAB: 20030312

NOVELTY - A solution composition is a homogeneous solution of a metal complex dissolved in a solvent. The metal complex has ligands chosen from trifluoro acetic acid group, penta fluoro propionic acid group and/or **pyridine** group coordinated to metal ion of the metal seed containing **rare earth elements**, **barium** and **copper**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) Amorphous solid substance of a metal complex obtained by volatilizing excess solvent from the solution composition;

(2) Manufacture of metal-complex solution which involves dissolving the amorphous substance of the metal complex in a solvent and forming a homogeneous solution; and

(3) Formation of **superconductor** film which involves coating the solution composition on a substrate, heat-processing coating at 200-500 deg. C and baking the coated film at 700-1000 deg. C.

USE - For rare earth **superconductor** film production (claimed).

ADVANTAGE - The solution composition provides a neutral and a uniform coating film. A favorable **superconductor** film is formed easily. Since the coating-baking process is performed repeatedly, the thickness of the film is controlled effectively and a thick-film is formed easily. The dissolution of the metal complex in an organic solvent improves the stability of the homogeneous solution.

Dwg.0/0

FS CPI EPI

FA AB; DCN

MC CPI: E07-D04C; E10-C04F; E10-C04L1; E34-D03; E34-E; L03-A01C

EPI: U14-F01A1; U14-F01A5; X12-D06B1A

L49 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:42616 CAPLUS

DN 130:104511

ED Entered STN: 21 Jan 1999

TI Compositionally different polymer-based sensor elements and methods for preparing same

IN Lewis, Nathan S.; Grubbs, Robert H.; Doleman, Brett; Sanner, Robert; Severin, Erik

PA California Institute of Technology, USA

SO PCT Int. Appl., 113 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G01N027-12

CC 80-2 (Organic Analytical Chemistry)

Section cross-reference(s): 38, 59

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9900663	A1	19990107	WO 1998-US13486	19980629
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9881755	A1	19990119	AU 1998-81755	19980629
	AU 741702	B2	20011206		
	EP 993605	A1	20000419	EP 1998-931709	19980629
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	US 6290911	B1	20010918	US 1998-106791	19980629
	JP 2002508064	T2	20020312	JP 1999-505849	19980629
PRAI	US 1997-51203P	P	19970630		
	WO 1998-US13486	W	19980629		

AB The present invention provides a combinatorial approach for preparing arrays of chemical sensitive polymer-based sensors which are capable of detecting the presence of a chemical analyte in a fluid in contact therewith. The described methods and devices comprise combining varying ratios of at least 1st and 2nd organic materials which, when combined, form a polymer or polymer blend that is capable of absorbing a chemical analyte, thereby providing a detectable response. The detectable response of the sensors prepared by this method is not linearly related to the mole fraction of at least one of the polymer-based components of the sensors, thereby making arrays of these sensors useful for a variety of sensing tasks.

KOROMA EIC1700

ST polymer compn gas sensor
 IT Electric conductors
 Electronic device fabrication
 Interpenetrating polymer networks
Superconductors
 (analyte detection in fluid by sensor array based on polymer
 combinatorial library)
 IT Acrylic polymers, uses
 Carbohydrates, uses
 Poly(arylenealkenylenes)
 Poly(arylenealkylenes)
 Polyacetylenes, uses
 Polyamides, uses
 Polyanhydrides
 Polyanilines
 Polybenzimidazoles
 Polybenzothiazoles
 Polybenzoxazoles
 Polycarbonates, uses
 Polycyanurates
 Polyesters, uses
 Polymer blends
 Polyolefins
 Polyoxadiazoles
 Polyoxymethylenes, uses
 Polyphosphazenes
 Polyquinoxalines
 Polysilanes
 Polysiloxanes, uses
 Polysulfides
 Polysulfonamides
 Polysulfones, uses
 Polyureas
 Polyurethanes, uses
 Polyvinyl acetals
 Silazanes
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (analyte detection in fluid by sensor array based on polymer
 combinatorial library)
 IT Alloys, analysis
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (analyte detection in fluid by sensor array based on polymer
 combinatorial library)
 IT Carbon black, analysis
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (analyte detection in fluid by sensor array based on polymer
 combinatorial library)
 IT Carbonaceous materials (technological products)
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST

(Analytical study); USES (Uses)
(analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Charge transfer complexes
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Coke
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Metals, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Oxides (inorganic), analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Resistors
(chemiresistors; analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Semiconductor materials
(doped; analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Gas sensors
(electrochem.; analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Vinyl compounds, uses
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ester group-containing, polymers; analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Vinyl compounds, uses
Vinyl compounds, uses
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(halo, polymers; analyte detection in fluid by sensor array based on polymer combinatorial library)

IT Air analysis
Composites
Electric resistance
(methanol determination in air by sensor array based on polymer combinatorial library)

IT Volatile organic compounds
RL: ANT (Analyte); ANST (Analytical study)
(organic vapors determination in air by sensor array based on polymer

combinatorial library)

IT Nitriles, uses
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (polymers, vinyl; analyte detection in fluid by sensor array based on
 polymer combinatorial library)

IT Alkadienes
 Carboranes
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (polymers; analyte detection in fluid by sensor array based on polymer
 combinatorial library)

IT Polymers, uses
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (polysulfonates; analyte detection in fluid by sensor array based on
 polymer combinatorial library)

IT Macrocyclic compounds
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (stacked complexes; analyte detection in fluid by sensor array based on
 polymer combinatorial library)

IT Polyesters, uses
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (thio-; analyte detection in fluid by sensor array based on polymer
 combinatorial library)

IT Ethers, uses
 Ethers, uses
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (vinyl, polymers; analyte detection in fluid by sensor array based on
 polymer combinatorial library)

IT 9003-20-7, Polyvinyl acetate 9003-53-6D, Poly(styrene), derivs.
 9010-39-3D, Poly(triazole), derivs. 9011-14-7, Polymethylmethacrylate
 25013-01-8D, Poly(pyridine), derivs. 25233-34-5D,
 Polythiophene, derivs. 25931-07-1D, derivs. 30604-81-0D, Polypyrrole,
 derivs. 31977-51-2D, Poly(piperazine), derivs. 82451-55-6D,
 Poly(indole), derivs. 89014-29-9D, derivs. 89014-30-2D,
 Poly(piperidine), derivs. 95109-07-2D, Poly(pyridazine), derivs.
 102250-99-7D, Poly(dibenzofuran), derivs. 105809-46-9D, Poly(pyrazole),
 derivs. 111546-00-0D, derivs. 219320-44-2D, derivs. 219320-45-3
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST
 (Analytical study); USES (Uses)
 (analyte detection in fluid by sensor array based on polymer
 combinatorial library)

IT 1303-00-0, Gallium arsenide (GaAs), analysis 1312-43-2, Indium oxide
 (In2O3) 1317-33-5, Molybdenum sulfide (MoS2), analysis 1518-16-7D,
 Tetracyanoquinodimethane, alkali metal complexes 2876-98-4 7439-88-5D,
 Iridium, halocarbonyl complexes, analysis 7440-06-4, Platinum, analysis
 7440-21-3, Silicon, analysis 7440-22-4, Silver, analysis 7440-50-8,
Copper, analysis 7440-57-5, Gold, analysis 7782-42-5,

Graphite, analysis 11109-26-5 13463-67-7, Titanium oxide (TiO₂), analysis 15004-88-3D, Tetracyanoplatinate(2-), complexes 18282-10-5, Tin oxide (SnO₂) 22398-80-7, Indium phosphide (InP), analysis 31366-25-3D, halide complexes 50958-14-0, Platinum sodium oxide 99685-96-8, Fullerene-60 109064-29-1, **Barium copper yttrium** oxide (Ba₂Cu₃YO₇) 125270-74-8, **Barium calcium copper** titanium oxide (Ba₂Ca₂Cu₃Ti₂O₁₀)

RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(analyte detection in fluid by sensor array based on polymer combinatorial library)

IT 67-56-1, Methanol, analysis

RL: ANT (Analyte); ANST (Analytical study)

(methanol determination in air by sensor array based on polymer combinatorial library)

IT 64-17-5, Ethanol, analysis 67-64-1, Acetone, analysis 75-05-8, Acetonitrile, analysis 141-78-6, Acetic acid ethyl ester, analysis

RL: ANT (Analyte); ANST (Analytical study)

(organic vapors determination in air by sensor array based on polymer combinatorial library)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Commissariat Energie Atomique; EP 0161987 A 1985 CAPLUS
- (2) Commissariat Energie Atomique; EP 0251934 A 1988 CAPLUS
- (3) Draegerwerk Ag; DE 4241438 A 1994 CAPLUS
- (4) Inst Chemo Biosensorik; DE 19509518 A 1996 CAPLUS
- (5) Lonergan, M; Chem Mater 1996, V8, P2298 CAPLUS
- (6) Lonergan, M; IEEE Aerospace Conference Proceedings (CAT N 97CH36020) 1997, V3, P583
- (7) Mastiff Electronic Systems Ltd; WO 9607901 A 1996 CAPLUS
- (8) Miller, L; US 5417100 A 1995 CAPLUS
- (9) Murata Manufacturing Co; DE 3305683 A 1984
- (10) Stetter, J; US 5512882 A 1996 CAPLUS

L49 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2

AN 1999:457853 CAPLUS

DN 131:152372

ED Entered STN: 27 Jul 1999

TI Preparation of epitaxial YbBa₂Cu₃O_{7-δ} on SiTiO₃ single-crystal substrates using a solution process

AU Matsubara, Ichiro; Paranthaman, Mariappan; Chirayil, Thomas G.; Sun, Ellen Y.; Martin, Patrick M.; Kroeger, Donald M.; Verebelyi, Darren T.; Christen, David K.

CS Chemical and Analytical Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN, 37831-6100, USA

SO Japanese Journal of Applied Physics, Part 2: Letters (1999), 38(7A), L727-L730

CODEN: JAPL D8; ISSN: 0021-4922

PB Japanese Journal of Applied Physics

DT Journal

LA English

CC 76-4 (Electric Phenomena)

AB The authors have prepared YbBa₂Cu₃O_{7-δ} (Yb-123) epitaxial films on SrTiO₃ (100) single crystal substrates by a metalorg. decomposition (MOD) method. The precursor solution was prepared by dissolving ytterbium acetylacetonate, **barium** neodecanoate, and **copper** (II) 2-ethylhexanoate in a mixture of solvents containing toluene/**pyridine** /propionic acid. The precursor solns. were spin-coated on the substrates and fired at 730-770° in 100-ppm oxygen atmospheres followed by 1 atm O₂ annealing. X-ray diffraction results from the theta-2theta, phi, and omega scans for the films revealed a (100) cubic texture. FWHM values for Yb-123 (103) and Yb-123 (005) were 1.5° (in-plane epitaxy, Δφ) and 0.73° (out-of-plane epitaxy, Δω), resp. The highest T_c obtained for Yb-123 films was 87.2 K. The measured transport J_c was 6.4 + 105 A/cm² at 77 K and self-field.

ST **yttrium barium** cuprate **superconductor** chem deposition; MOCVD epitaxy **yttrium barium** cuprate **superconductor**

IT Coating process
(electroless, metalorg; preparation of epitaxial YbBa₂Cu₃O_{7-δ} on SiTiO₃ single-crystal substrates using solution process)

IT Epitaxy
(preparation of epitaxial YbBa₂Cu₃O_{7-δ} on SiTiO₃ single-crystal substrates using solution process)

IT 109064-29-1D, **Barium copper yttrium** oxide (Ba₂Cu₃YO₇), oxygen-deficient
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(preparation of epitaxial YbBa₂Cu₃O_{7-δ} on SiTiO₃ single-crystal substrates using solution process)

IT 12060-59-2, **Strontium** titanate
RL: NUU (Other use, unclassified); USES (Uses)
(preparation of epitaxial YbBa₂Cu₃O_{7-δ} on SiTiO₃ single-crystal substrates using solution process)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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- (5) Kumagai, T; Jpn J Appl Phys 1990, V29, PL940 CAPLUS
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- (7) Manabe, T; Physica C 1998, V303, P53 CAPLUS
- (8) Matsubara, I; to be published in Physica C
- (9) Norton, D; Science 1996, V274, P755 CAPLUS
- (10) Paranthaman, M; Mater Res Bull 1997, V32, P1697 CAPLUS
- (11) Paranthaman, M; to be published in Proc 9th CIMTEC-World Ceramics Congress Florence Italy 1998
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- (13) Shibata, J; Jpn J Appl Phys 1998, V37, PL1141 CAPLUS
- (14) Shoup, S; J Mater Res 1997, V12, P1017 CAPLUS
- (15) Yamagiwa, K; Physica C 1998, V304, P12 CAPLUS
- (16) Yamagiwa, K; Physica C 1998, V309, P231 CAPLUS

L49 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1993:223593 CAPLUS
 DN 118:223593
 ED Entered STN: 29 May 1993
 TI Molecular design of sol-gel derived ceramic **superconductors**
 AU Kordas, G.; Teepe, M. R.; Moon, B. M.; Kenzer, D. S.
 CS Inst. Mater. Sci., Natl. Cent. Sci. Res. "Demokritos", Attikis, Greece
 SO European Materials Research Society Monographs (1992), 5 (EUROGEL '91),
 219-26
 CODEN: EMRMEH; ISSN: 0927-5010
 DT Journal
 LA English
 CC 76-4 (Electric Phenomena)
 AB Y methoxyethoxide, **barium** methoxyethoxide and various
copper(II) alkoxide groups were used as precursors for the
 formation of YBa₂Cu₃O_{7-δ} stable sols in a 2-methoxyethanol/methyl Et
 ketone/toluene/diisopropyl ketone solvent system. Sol fractal dimensions
 were varied with the sol concentration and with the addition of **pyridine**.
 A strong correlation was found between the wettability and the fractal
 dimensions of the various precursors as determined by contact angle
 measurements. Tl₂CaBa₂Cu₂O_{8+x} and Tl₂Ca₂Ba₂Cu₃O_{10+x}
superconductors were produced using a modified alkoxide sol-gel
 technique. Thallium butoxide, **Ca-** and **Ba**
 -methoxyethoxide, and **Cu**(II) ethoxide were used as precursors.
 Complete solubility of the **Cu** component was accomplished by using the
 additive 2-dimethylethanolamine in a solvent system of 1-butanol,
 2-methoxyethanol, Me Et ketone, and toluene. Samples were produced by
 heating the sols under vacuum, prefiring the resulting gels to
 525°, pelletizing, and firing at 885° in closed containers.
 Tc(Zero) values for these phases were 105 and 115 K with increases in
 these transitions occurring with firing times. Microstructural anal.
 revealed that a large degree of directional plate-like crystal growth
 occurred on the surface of the pellets.
 ST cuprate **superconductor** sol gel process; **yttrium**
barium cuprate sol gel process; thallium **calcium**
barium cuprate sol gel
 IT **Superconductors**
 (cuprate, mol. design of sol-gel derived ceramic)
 IT 28099-67-4, **Calcium** methoxyethoxide 60100-14-3 115503-13-4,
Barium methoxyethoxide 115668-57-0
 RL: PRP (Properties)
 (cuprate **superconductors** from, by sol gel process)
 IT 109064-29-1D, **Barium copper yttrium** oxide
 (Ba₂Cu₃YO₇), oxygen-deficient 115833-27-7D, **Barium**
calcium copper thallium oxide (Ba₂CaCu₂Tl₂O₈),
 oxygen-excess 115866-07-4, **Barium calcium**
copper thallium oxide (Ba₂Ca₂Cu₃Tl₂O₁₀)
 RL: PRP (Properties)
 (mol. design of sol-gel derived superconductive ceramic)
 IT 1184-54-9, **Copper** methoxide 2850-65-9, **Copper**
 ethoxide 23578-23-6 78469-41-7 107027-86-1

RL: TEM (Technical or engineered material use); USES (Uses)
 (superconductor ceramics from, by sol gel process)

L49 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1990:524828 CAPLUS
 DN 113:124828
 ED Entered STN: 29 Sep 1990
 TI Preparation of high-temperature-superconductor ceramic bodies
 IN Mizuta, Susumu; Kumagai, Toshiya; Odan, Kyoji; Miura, Hiroshi; Bando, Yasuo
 PA Agency of Industrial Sciences and Technology, Japan; Ube Industries, Ltd.
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C04B035-00
 ICS H01B012-00; D06M011-00; D06M015-00
 CC 76-4 (Electric Phenomena)
 Section cross-reference(s): 57

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01298057	A2	19891201	JP 1988-129588	19880526
	JP 07064626	B4	19950712		
PRAI	JP 1988-129588		19880526		
AB	In the process, a green or sintered body of a high-temperature-superconductor ceramic is impregnated with a solution containing metal oxides corresponding to the composition of the ceramic, and sintered. The superconductor ceramic body has large critical c.d.				
ST	high temp superconductor ceramic body				
IT	Superconductors (ceramic bodies from, preparation of high-temperature)				
IT	Naphthenic acids, compounds RL: PREP (Preparation) (barium salts, impregnation with solns. containing, in preparation of high-temperature superconductor ceramic bodies)				
IT	Naphthenic acids, compounds RL: PREP (Preparation) (bismuth salts, impregnation with solns. containing, in preparation of high-temperature superconductor ceramic bodies)				
IT	Naphthenic acids, compounds RL: PREP (Preparation) (calcium salts, impregnation with solns. containing, in preparation of high-temperature superconductor ceramic bodies)				
IT	Naphthenic acids, compounds RL: PREP (Preparation) (copper salts, impregnation with solns. containing, in preparation of high-temperature superconductor ceramic bodies)				
IT	Naphthenic acids, compounds RL: PREP (Preparation) (strontium salts, impregnation with solns. containing, in preparation of high-temperature superconductor ceramic bodies)				

IT Naphthenic acids, compounds
 RL: PREP (Preparation)
 (yttrium salts, impregnation with solns. containing, in preparation of high-temperature **superconductor** ceramic bodies)

IT 71-36-3, 1-Butanol, uses and miscellaneous 79-09-4, Propanoic acid, properties 108-88-3, uses and miscellaneous 110-86-1, **Pyridine**, uses and miscellaneous 12084-29-6, **Barium acetylacetonate** 13395-16-9 15554-47-9, **Yttrium acetylacetonate**
 RL: USES (Uses)
 (impregnation with solns. containing, in preparation of high-temperature **superconductor** ceramic bodies)

IT 107539-20-8P, **Barium copper yttrium oxide**
 114901-61-0P, **Bismuth calcium copper strontium oxide**
 RL: TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (**superconductor**, high-temperature, ceramic bodies from, preparation of)

L49 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
 AN 1990:29250 CAPLUS
 DN 112:29250
 ED Entered STN: 21 Jan 1990
 TI Manufacture of oxide **superconductor**
 IN Fujiki, Michiya; Sukegawa, Takeshi
 PA Nippon Telegraph and Telephone Public Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C01G003-00
 ICS C04B035-00; H01B013-00; H01L039-12
 ICA H01B012-00
 CC 76-4 (Electric Phenomena)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63307113	A2	19881214	JP 1987-142904	19870608
PRAI	JP 1987-142904		19870608		

AB A method for manufacturing a **superconductor** MxMy1CuzOw (M = B, Al, Ga, In, Tl, Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and/or La; M1 = Be, Mg, **Ca**, **Sr**, **Ba**, Ra, Sm, and/or Pb; x, y, z, w = atomic fraction) involves mixing a solution containing ions of M, M1, and Cu with a solution containing a ≥ 2 -coordinating chelating agent and heating the chelates to form a metal oxide. A **superconductor** is prepared at relatively low temperature

ST oxide **superconductor** chelating agent
 IT Sulfonium compounds
 RL: PREP (Preparation)
 (alkyl, oxide **superconductor** preparation from solns. containing)

IT Chelating agents

Hydroxamic acids

Lecithins

RL: PREP (Preparation)

(oxide **superconductor** preparation from solns. containing)

IT **Superconductors**

(oxide, manufacturing of, from solns. containing chelating agents)

IT Sulfonium compounds

RL: PREP (Preparation)

(alkyl, oxide **superconductor** preparation from solns. containing)

IT 65107-46-2P, Calcium copper lanthanum oxide

107539-20-8P, Barium copper yttrium oxide

109457-22-9P, Barium copper dysprosium oxide

109457-23-0P, Barium copper erbium oxide

109457-25-2P, Barium copper lutetium oxide

109489-92-1P, Barium copper holmium oxide

110687-33-7P, Barium copper ytterbium oxide

110687-34-8P, Barium copper thulium oxide

110687-67-7P, Barium copper gadolinium oxide

111420-26-9P, Barium copper terbium oxide

116443-13-1P, Copper strontium yttrium oxide

119537-63-2P, Copper scandium strontium

oxide

RL: PREP (Preparation)

(manufacturing of **superconductor** of, from solns. containing chelating agent)

IT 50-81-7, Ascorbic acid, uses and miscellaneous 56-41-7, L-Alanine, uses

and miscellaneous 57-55-6, 1,2-Propanediol, uses and miscellaneous

60-00-4, uses and miscellaneous 67-43-6, Diethylene triamine penta

acetic acid 77-92-9, uses and miscellaneous 79-40-3, Rubenic acid

87-69-4, uses and miscellaneous 110-15-6, Butanedioic acid, uses and

miscellaneous 110-94-1, Glutaric acid 139-13-9, Nitrilotriacetic acid

141-82-2, Malonic acid, uses and miscellaneous 526-95-4, Gluconic acid

869-52-3, Triethylene tetramine hexaacetic acid 1336-21-6D, Ammonium

hydroxide ((NH₄)(OH)), alkyl derivs. 6674-22-2 9002-89-5, Poly(vinyl

alcohol) 9003-01-4, Poly(acrylic acid) 9003-05-8, Polyacrylamide

9003-39-8, Poly(vinyl pyrrolidone) 9003-53-6D, Polystyrene, imino

diacetic acid-substituted 9004-34-6, Cellulose, uses and miscellaneous

25087-26-7, Poly(methacrylic acid) 25322-68-3 57951-36-7,

Dimethylamino pyridine 68517-44-2, Cetyl methyl cellulose

RL: USES (Uses)

(oxide **superconductor** preparation from solns. containing)

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